

REGISTERED ENVIRONMENTAL HEALTH SPECIALIST
PROGRAM EVALUATION

SCHOOL OF PUBLIC HEALTH
UNIVERSITY OF CALIFORNIA, LOS ANGELES

CALIFORNIA DEPARTMENT OF PUBLIC HEALTH
Registered Environmental Health Specialist Program

APRIL 2011

UCLA REHS Program Evaluation Report
April 2011

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1. INTRODUCTION: EVALUATION PROCESS

The California Department of Public Health (CDPH), registered environmental health specialist (REHS) program is responsible for the review and approval of environmental health degree programs offered by universities and colleges in California. The intent of this review is to ensure that the educational requirements for registration as an environmental health specialist described in California Health and Safety Code, Section 106635 are satisfied through the environmental health curriculum of the university.

Option V of Section 106635 describes the minimum coursework for an environmental health degree program. Students majoring in environmental health need an undergraduate or graduate education program that includes a solid background in the sciences. Students graduating from undergraduate or graduate environmental health programs with curricula approved by CDPH are eligible to take the REHS examination upon graduation.

The evaluation process consists of a review of the presurvey information provided by the university and a site visit by members of the Environmental Health Specialist Registration Committee (Committee) and CDPH staff. A copy of the draft report is shared with the university. The final report may be amended based on comments and factual errors identified by the university. The Committee will review the final report and provide concluding recommendations.

University of California, Los Angeles (UCLA) School of Public Health applied to CDPH for approval of their environmental health degree program and submitted a Self Survey Report dated May 15, 2008. The site team visited UCLA on November 19 and 20, 2008.

A major revision to the UCLA REHS program was submitted to CDPH in April 2010 in which UCLA proposed a REHS certificate program that they were developing as well as a REHS guidance program that they would use until the certificate program could be approved.

2. ORGANIZATIONAL STRUCTURE

UCLA School of Public Health is one of eleven professional schools at UCLA. The REHS program is administered by the Department of Environmental Health Sciences within the School of Public Health.

According to their website, “The Department of Environmental Health Sciences focuses its research and educational activities on the protection of human health from biological, chemical, and physical hazards in the environment. Its graduates are highly trained scientists and professionals capable of identifying and measuring agents of environmental concern; evaluating health, environmental, and other impacts of such agents; developing means for their effective management; and evaluating alternative policies directed at improving and protecting environments. Training is accomplished through several degree programs, which offer specialized study in selected academic areas. Graduates of the department pursue careers in the private or public sector as researchers, educators, managers, policymakers, and and/or practitioners. Multidisciplinary campus and community collaborations allow many community/field interactions, which add richness to the educational experience. Students and faculty in epidemiology, behavioral sciences and health education, biostatistics, occupational health, environmental genomics and international studies interact regularly with those in environmental health sciences programs. Interactions at UCLA also exist with the Schools of Medicine, Nursing, Management, Public Policy, Engineering and Applied Sciences, Law, and the College of Letters & Science. Collaborations include those with LA County Departments, Regional Agencies, State Departments and Boards, and Federal Agencies as well as industry, labor and consulting groups.”

UCLA is a public research institution and a member of the Association of American Universities and the Western Association of Schools and Colleges, whose Accrediting Commission for Senior Colleges and Universities accredited UCLA most recently in 1998 and will next review UCLA in 2008.

The School of Public Health is accredited by the Council on Education for Public Health, the Accrediting Commission on Education for Health Services, the Applied Science Accreditation Commission of the Accreditation Board for Engineering and Technology for the Master’s of Science (MS) concentration in Industrial Hygiene and the American Board of Preventive Medicine for the residency in general preventive medicine. Thus, the Department of Environmental Health Sciences is approved by all of the above which apply with specific mention of the Council on Education for Public Health and the Board for Engineering and Technology for the MS concentration in Industrial Hygiene. In addition, the environmental health program has had an endorsement by the CDPH REHS program which is responsible for the review and approval of

educational institutions offering degree programs that meet the requirements of the REHS program,.

2. SITE VISIT

The survey team consisted of Lawrence Dwoskin, MS, REHS, Director of Environmental Health, Tulare County Environmental Health Department; Todd Frantz, REHS, Program Manager, Disneyland Resort; Robert Phalen, PhD, Associate Professor, California State University, San Bernardino; and Margaret Blood, REHS, Registration Program Administrator, CDPH.

After reviewing the Self Study Report the survey team conducted a site visit on November 19-20, 2008. The team met first with Jane Valentine, PhD, REHS Program Coordinator, reviewed the proposed agenda, and toured the UCLA campus. Following this meeting members of the team met with Richard Jackson, MD, MPH, Chair of Environmental Health Sciences Department, and Hilary Godwin, PhD Associate Dean, School of Public Health.

On November 20 the entire team met with Dr. Jackson and Dr. Godwin to discuss the objectives of the visit, an overview of the REHS program, and the survey materials. Dr. Jackson led the team visits of various classrooms and laboratories showcasing the critical research performed by department faculty, students, and staff. Dr. Valentine guided the group through a tour of the Biomed Library.

Current students of the department were invited to lunch with the site team providing an opportunity for candid discussions regarding the current REHS program which was followed in the afternoon by a similar opportunity with faculty staff. The effect of these informal meetings highlighted a contrast between the interests of the faculty staff and the objectives of the students.

The team met Linda Rosenstock, MD, Dean of the School of Public Health; she expressed her enthusiastic support for the Department of Environmental Sciences and the leadership of Dr. Jackson and Dr. Godwin.

4. FACULTY

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5. LABORATORY FACILITIES AND EQUIPMENT

Currently there is no specific laboratory space designated to environmental health instruction in the general environmental health science program. Research space of individual faculty members exists and students are allowed to conduct research and field study projects in the laboratories of individual faculty. Laboratory space dedicated specifically to the environmental health program was found which totaled 1484 square feet. Environmental health space for teaching and training students does exist in the industrial hygiene program totaling 863 square feet. In the last several years students have rotated through the labs of the professors and have been allowed the use of designated teaching space in one of the faculty labs during the academic term. The laboratory space of the Environmental Health Science Department totals 14,376 square feet. for a total of 14 faculty. Shared use of space and facilities has been excellent.

Sampling, monitoring, testing, and research equipment are presented in Table 6. This list represents some of the major equipment holdings in the Environmental Health Science Department. Collaborative arrangements for equipment use have also been facilitated through agreements with Civil and Environmental Engineering, the Department of Chemistry, and the Department of Organismic Biology, Ecology, and Evolution. For example, the G.C. Mass Spectrophotometer located in Civil and Environmental Engineering has routinely been used for teaching and research purposes under the direction of Ed Ruth, Senior Project Engineer

6. CURRICULUM

Students in the REHS program will be graduate students of the School of Public Health and will follow a required course curriculum in accordance with CDPH criteria. The Master's of Public Health (MPH) degree will be linked to this curriculum. In the future the curriculum requirements will be part of a certificate program. In the interim students will be individually counseled to take all required courses.

APPROVED CURRICULUM

Basic science core

STATUTORY REQUIREMENTS
General Biology with lab (1 year)
General Chemistry with lab (1 year)
General Physics with lab (1 year)
Organic Chemistry (1 course)
Microbiology with lab (1 course)
Calculus or College Algebra (1 course)

Environmental Health Science Department

Required Course (quarter units)	Curriculum
Environmental Health Administration (4)	EHS 209 Practical Applications in Environmental Health Science (2) and EHS 100 Introduction to Health Service Organizations (4)
Epidemiology (4)	EHS 100 Epidemiology
Statistics (4)	EHS 100 A and B Biostatistics
Field Orientation Course	EHS 400 Internship/Field Study (400 hours)

Environmental Health Science Course Electives (23 units)

EHS 200A Foundations of Environmental Health
EHS 200B Foundations of Environmental Health Sciences
EHS 200D Studies in Environmental Health Sciences
EHS 202 Seminar in Environmental Chemistry (2)
EHS 208 Built Environment and Health (4)
EHS 212 Applied Ecology
EHS 214 Children's Environmental Health: Prenatal and Postnatal
EHS 225 Atmospheric Transport and Transformations of Airborne Chemicals
EHS 240 Fundamentals of Toxicology
EHS 235 Environmental Policy for Science and Engineering
EHS 152D Properties and Measurement of Airborne Particles
EHS 252D Properties and Measurement of Airborne Particles
EHS 252E Identification and Measurement of Gases and Vapors (4)
EHS 252F Industrial Hygiene Measurements, Lab (3)
EHS 252G Industrial and Environmental Hygiene Assessment (4)
EHS 255 Control of Airborne Contaminants in Industry
EHS 256 Biological and Health Surveillance Monitoring in Occupational/Environmental Health (4)
EHS 257 Risk Assessment and Standard Setting
EHS 258 Identification and Analysis of Hazardous Waste (4)
EHS 410A Instrumental Methods in Environmental Sciences
EHS 410B Instrumental Methods in Environmental Sciences, Lab

All students in the MPH program in Environmental Health Science are required to complete a 400-hour internship in an appropriate

environmental health setting. Internship settings may include government agencies or departments, nonprofit organizations, local industry, consulting firms, community organizations, advocacy agencies, national laboratories, or a university, college, or school setting. Students can choose to find their own internship or work with the internship coordinator to locate a setting through departmental contacts. Students are encouraged to complete the internship within a single academic year or summer.

Prior to starting the internship, the student must complete a MPH internship approval form and have it signed by the field mentor at the organization that is sponsoring the internship. Projects that involve only sampling and rudimentary analysis do not meet the mission of the internship program. When completing the internship approval form, the student should clearly articulate the questions to be addressed by the internship project. The student should then submit this form to his or her faculty advisor and the Environmental Health Science Department chair for approval.

Students must write a project summary paper related to the work performed during the internship. The paper must be approved by the field mentor and the faculty advisor. The subject of the paper may be on the student's research project, an environmental sampling or analysis activity, or a policy white paper related to the internship topic. Students should seek approval of their intended paper topic from their faculty advisor and field mentor prior to writing the paper to insure that the topic is appropriate.

UCLA recently created a position of internship coordinator to help students identify preceptors in either a public or private environmental or occupational health agency.

7. ADVISORY COMMITTEE

The Environmental Health Sciences Department Chair has convened a pro-bono diverse community advisory committee that will have no fiduciary duties and which will be meeting bi-annually in May and November of each year. The primary responsibility of the advisory committee will be to discuss the relevance, substance, and up to date issues that need to be addressed in the environmental health science curriculum with specific attention to the REHS certification. The advisory committee also will be a forum for discussion with academic personnel, environmental advocates,

and professionals from State agencies, private industry, and nonprofit organizations.

**Environmental Health Science Department Chair
Community Advisory Committee**

Angelo Bellomo
Director of Environmental Health
Los Angeles County Department of Public Health

Christopher Gavigan
CEO/Executive Director
Health Child Healthy World

Alfredo Gonzalez
Associate Director, The Nature Conservancy

Cynthia Hirschhorn
Architect and Environmental Designer

Martha Arguello
Executive Director, Physicians for Social Responsibility- LA

Ex Officio:
James Gibson PhD MPH Affiliate Faculty
Thomas Hatfield REHS DrPH Affiliate Faculty

Others currently are being recruited.

8. RECOMMENDATIONS

The Department of Environmental Health Science has the support of the UCLA School of Public Health. The faculty members are enthusiastic and dedicated to the program and its mission to prepare students for professional careers in environmental health and to inspire curiosity and lifelong learning.

The following recommendations are made to assist UCLA in providing a high quality and comprehensive environmental health program.

- A. Provide each graduate that applies to the State for registration as an environmental health specialist with the university's advisement form identifying that all required classes were completed.
- B. Forward changes in curriculum and faculty staffing to the REHS program each catalog year.

9. APPROVAL

CDPH commends UCLA for expanding the REHS program with their new certificate program that will enable graduate students of the School of Public Health to meet the REHS requirements. In recommending that the UCLA REHS program be approved by CDPH the Committee has specified that the certificate program must include the MPH degree as well as all of the educational requirements in order for the candidate to be eligible for the REHS exam.

Upon the recommendation of the Committee CDPH grants UCLA a three year approval of the REHS program described in this report that meets the requirements of the California Health and Safety Code, Section 106635, Option V and that includes the required coursework, a 400-hour internship and project summary paper, and a MPH degree. This approval will be valid until April 2014.